

REMARKS

This paper responds to the Office Action mailed on August 3, 2006.

Claims 1, 4, 6-8, 10-11, 15, 23, 26, 48, 52, 54, 57 and 58 are amended, claims 1, 3-13, 15-17, 23-30, 48-54, 57 and 58 are now pending in this application.

§112 Rejection of the Claims

Claims 54 and 58 were rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement.

Applicant has amended claims 54 and 58 to conform with 35 U.S.C. § 112, first paragraph. Applicant believes that claims 54 and 58 are in condition for allowance and respectfully requests reconsideration and removal of the rejections to claims 54 and 58.

§102 Rejection of the Claims

Claims 1, 3-8 were rejected under 35 U.S.C. § 102(e) for anticipation by Uzoh (U.S. 6,258,707). Applicant respectfully traverses:

Applicant respectfully traverses on the grounds that no *prima facie* case of anticipation presently exists for any of claims 1-8 because all elements are not disclosed in Uzoh, as discussed below.

Regarding claims 1, 3, 4-6, 7, 8:

Claims 1 and 7 as currently presented, recites in part: "a trench including a first barrier layer and a seed layer, the trench having a width and a depth, the depth being greater than a **critical depth in essentially every part of the trench** (emphasis added)." Claims 4 and 8 as currently presented, recites in part: "a trench including a first barrier layer and a seed layer, the trench having a width and a depth, the depth being greater than a **critical depth in every part of the trench** (emphasis added)."

The office action states that Uzoh teaches the limitations of claims 1, 4, 7 and 8 listed above. In contrast, with claim 1, 4, 7 and 8, Uzoh apparently merely discloses a trench including a first barrier layer (118) and a seed layer ("copper seed", col. 10, lines 23-34). More specifically, Uzoh does not teach the trench having a depth being greater than a **critical depth in every part of the trench** or a **critical depth in essentially every part of the trench**. On the

contrary, Uzoh teaches a terraced trench formation. *See* Abstract and Figures 16, 17 as cited in the office action.

Applicant respectfully asserts the Office Action has not satisfied a *prima facie* case of anticipation, because Uzoh does not disclose the limitations listed above for claims 1, 4, 7 and 8. As a result, Applicant respectfully requests reconsideration and removal of the rejection of claims 1, 4, 7 and 8. Claim 3 is a dependant of claim 1; claims 5 and 6 are dependants of claim 4; and claim 9 is dependant of claim 8. Claims 1, 4, 7 and 8 are believed to be allowable. As a result, Applicant respectfully requests reconsideration and removal of the rejection of claims 1, 3-9.

§103 Rejection of the Claims

Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Uzoh (U.S. 6,258,707) in combination with Leiphart (U.S. 6,833,623). Applicant respectfully traverses.

Applicant respectfully traverses on the grounds that no *prima facie* case of obviousness presently exists for any of claims 9 and 10, as discussed below. The Examiner has the burden under 35 U.S.C. 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Similar to the discussion above under claim 8, both claims 9 and 10 have the limitation “a trench including a first barrier layer and a seed layer, the trench having a width and a depth, the depth being greater than a **critical depth in every part of the trench** (emphasis added).” Neither Uzoh, Leiphart nor Fukuda alone or in combination teaches or suggests the above limitation.

Accordingly, Applicant cannot find in Uzoh, Leiphart or Fukuda any disclosure, teaching or suggestion of “a trench including a first barrier layer and a seed layer, the trench having a width and a depth, the depth being greater than a **critical depth in every part of the trench** (emphasis added),” as recited in claims 9 and 10.

As neither Uzoh, Leiphart, nor Fukuda either alone or in combination discloses the above claimed limitation of claims 9 and 10, the Office Action has not satisfied the burden of proof required for an obviousness rejection. As a result, Applicant respectfully requests reconsideration and removal of the rejection of claims 9 and 10.

Allowable Subject Matter

Claims 11-13 15-17, 23-30, 48-53 and 57 were allowed.

Applicant acknowledges the allowance of claims 11-13, 15-17, 23-30, 48-53 and 57.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

HOWARD E. RHODES

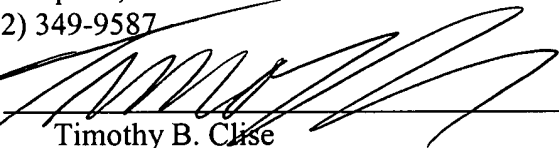
By his Representatives,

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Date

3 Nov. '00

By


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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 3 day of November 2006.

LISA ROSORSKE

Name

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Signature